

Name: <i>(as it would appear on official course roster)</i>	
Email address:	@umail.ucsb.edu
Optional: name you wish to be called if different from name above.	section 4, 5, or 6
Optional: name of "homework buddy" (leaving this blank signifies "I worked alone")	

You may collaborate on this homework with AT MOST one person, an optional "homework buddy".

# 1

# H04

CS56 W16

## H04: Due Tuesday, 01.12 in GradeScope

**Inheritance, Interfaces, Abstract Classes, Polymorphism (HFJ Ch 7,8)**

Assigned: Wed 01.06      Total Points: 50

MAY ONLY BE TURNED IN IN THE LECTURE/LAB LISTED ABOVE AS THE DUE DATE, OR IF APPLICABLE, SUBMITTED ON GRADESCOPE. There is NO MAKEUP for missed assignments; in place of that, we drop the five lowest scores (if you have zeros, those are the five lowest scores.)

### Reading Assignment:

We are moving right along, reading two more chapters. These two chapters are short, and a good bit of this is basic review of OOP concepts you may have already seen in CS24 (and possibly in CS32 if you took that, which is recommended, though not required, as a pre-req to CS56). The coverage of these chapters will be limited on the first midterm exam, since the programming assignments that reinforce this material aren't due until after the exam. But you need to read this material now and get comfortable with the ideas before you tackle the first lab that uses inheritance. We also need at least a basic understanding of inheritance and polymorphism before we can do assignments involving GUIs and graphics, or tackle the open source projects.

For submission via Gradescope:

- Visit <http://www.cs.ucsb.edu/~pconrad/gshints> for hints on submission
- Scan pages in **correct order**.
- Email and paper submissions **NOT** accepted for GradeScope assignments.
- Start early. "I couldn't figure out GradeScope" is not an acceptable excuse.

- HFJ:Chapter\_7, **165** through 196, and reading notes
- HFJ:Chapter\_8, **197** through 235, and reading notes
- Also: Review HFJ:Chapter\_5 and HFJ:Chapter\_6 and reading notes.

1. (6 pts) Fill in the homework header properly—this helps us keep the grading pipeline flowing so that you get credit for your work and get feedback more quickly.

- writing **either 4, 5, or 6** to indicate your **discussion section (lab)** meeting time
- entering BOTH your name AND your umail address EVERY time.

**Paper submissions:** One sheet of 8.5x11 paper double sided, or two DISCONNECTED SHEETS with your name on EACH. Please: **NO STAPLES, NO PAPERCLIPS, NO TAPE, NO ATTACHMENT OF ANY KIND**. These damage the document scanner.

**Scanned submission:** When submitting by PDF upload: scan your pages legibly and **SCAN IN THE CORRECT ORDER**. Page 1 first, then Page 2, in the correct orientation. Failure to scan properly may result in zero credit, meaning you "use up" one of your five "drop the lowest grade" slots.

2. (12 pts) Based on your reading in HFJ:Chapter\_7:

Complete the following exercise from p. 179, putting a check next to the relationships that make sense.

<input type="checkbox"/>	Oven extends Kitchen
<input type="checkbox"/>	Guitar extends Instrument
<input type="checkbox"/>	Person extends Employee
<input type="checkbox"/>	Ferrari extends Engine
<input type="checkbox"/>	FriedEgg extends Food

<input type="checkbox"/>	Beagle extends Pet
<input type="checkbox"/>	Container extends Jar
<input type="checkbox"/>	Metal extends Titanium
<input type="checkbox"/>	GratefulDead extends Band
<input type="checkbox"/>	Blonde extends Smart
<input type="checkbox"/>	Beverage extends Martini

